泰莱微波 Talent Microwave

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Low Noise Amplifier

1-18GHz /3.0dB NF/55dB Gain/10 dBm P1dB Model: TLLA1G18G-55-30

TLLA1G18G-55-30 is a low noise amplifier with a small signal gain of 55 dB and a nominal noise figure of 2.2 dB across the frequency range of 1 to 18 GHz. The DC power requirement for the amplifier is +12 V DC/90 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band:1-18GHz
- Gain: 55dB Min
- Noise Figure: 2.2dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	1		18	GHz
增益 Gain	55			dB
增益平坦度 Gain Flatness		±2.0		dB
噪声系数 Noise Figure		2.2	3	dB
线性输出功率 Output P1dB	10			dBm
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		2		:1
直流电压 DC Voltage		12		V DC
直流电流 DC Supply Current		90		mA
阻抗 Impedance		50		Ohms

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	44.8*29.2*11	mm
重量 Weight	200	g

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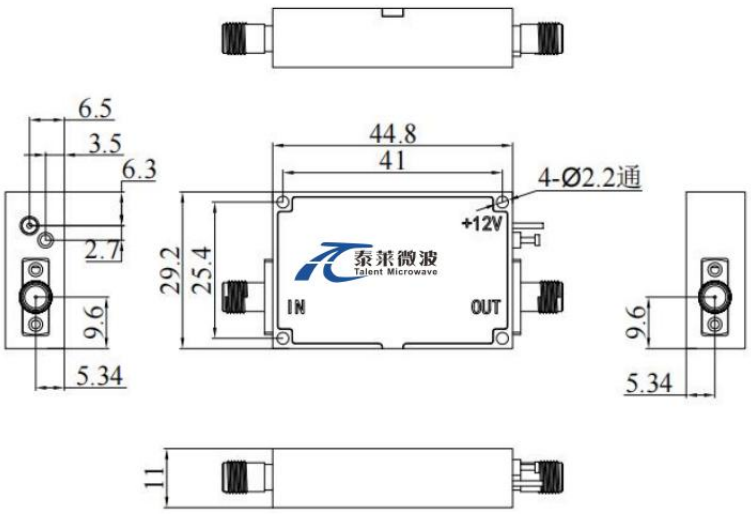
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	TBD
输入功率 RF Input Power	0 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing: Unit:mm



***Heat Sink Required During Operation

OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	℃
存储温度 Non-operating Temperature	-55		+125	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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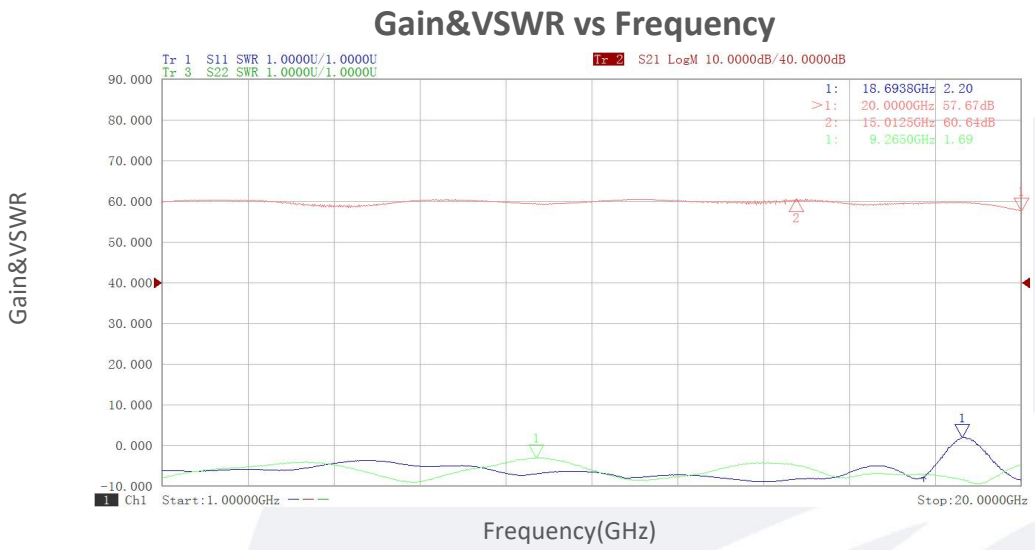
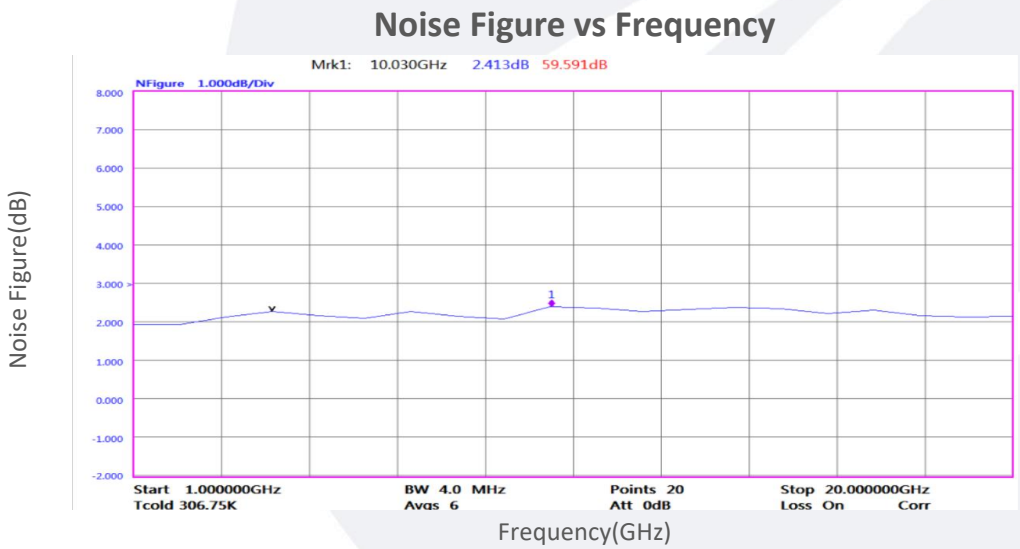
订货信息 Ordering Information:

标准型号 Base Number	描述 Desciption	版本号 Revision
TLLA1G18G-55-30	Low Noise Amplifier, 1-18GHz, Noise Figure:2.2dB, Gain:55 dB,P1dB:10dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA1G18G-55-30-HS	Low Noise Amplifier, 1-18GHz, Noise Figure:2.2dB, Gain:55 dB,P1dB:10dBm,+12V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:





Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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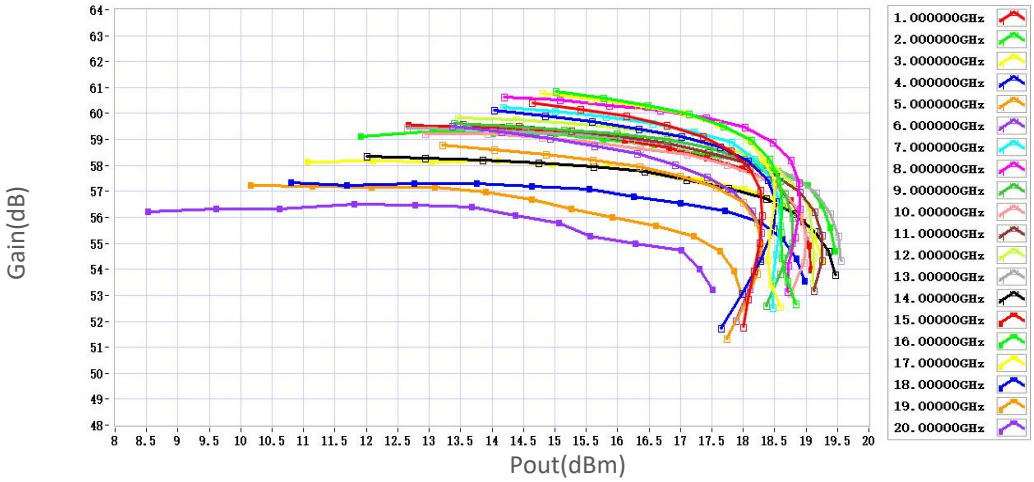
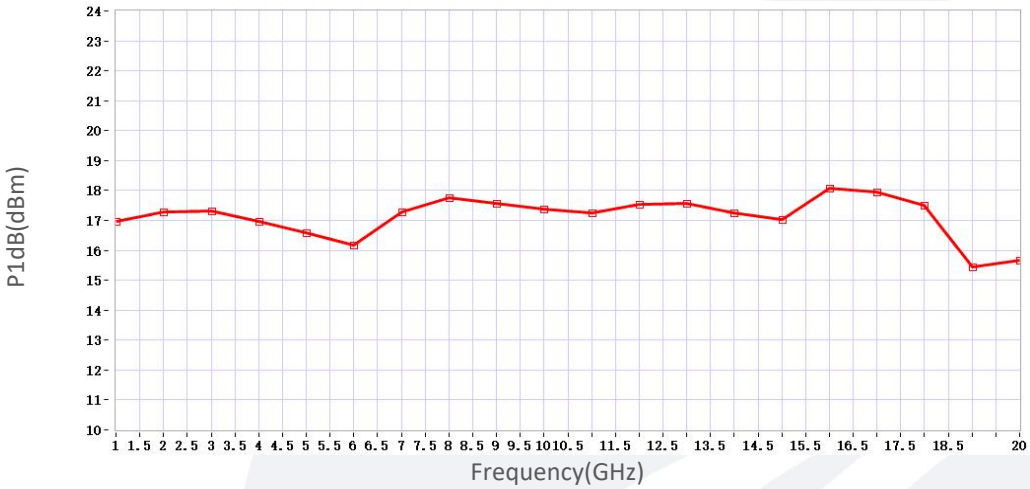
典型曲线 Typical Performance Data:

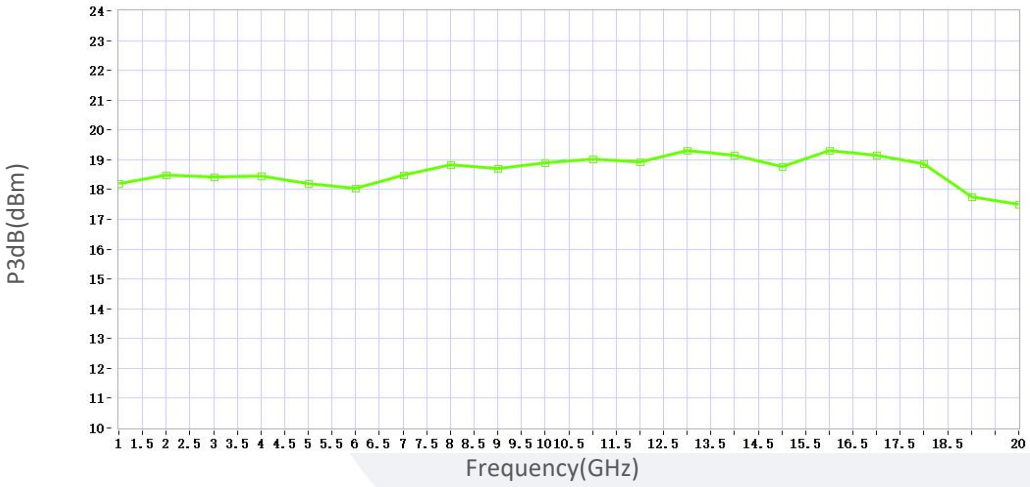
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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